

**South Pond  
2-Year Storm  
Undeveloped Runoff Calculations**

Area #	Area (sf)	Area (acres)	Existing Runoff Coefficient	Tc - Existing (min)	Rainfall Intensity (in/hr)	Q - Undeveloped (cfs)
2,3,4,6	455030	10.45	0.35	20	3.9	14.3

**Post-Development Runoff Calculations**

Area #	Area (sf)	Area (acres)	Existing Runoff Coefficient	Tc - Existing (min)	Rainfall Intensity (in/hr)	Q - Post Development (cfs)	Difference between Pre and Post Development Conditions
2,3,4,6	480528	11.03	0.50	10	5.3	23.2	15.0

**10-Year Storm  
Undeveloped Runoff Calculations**

Area #	Area (sf)	Area (acres)	Existing Runoff Coefficient	Tc - Existing (min)	Rainfall Intensity (in/hr)	Q - Undeveloped (cfs)
2,3,4,6	455030	10.45	0.35	20	5.9	21.6

**Post-Development Runoff Calculations**

Area #	Area (sf)	Area (acres)	Existing Runoff Coefficient	Tc - Existing (min)	Rainfall Intensity (in/hr)	Q - Post Development (cfs)	Difference between Pre and Post Development Conditions
2,3,4,6	480528	11.03	0.50	10	7.1	39.2	17.6

**25-Year Storm  
Undeveloped Runoff Calculations**

Area #	Area (sf)	Area (acres)	Existing Runoff Coefficient	Tc - Existing (min)	Rainfall Intensity (in/hr)	Q - Undeveloped (cfs)
2,3,4,6	455030	10.45	0.35	20	6.6	24.1

**Post-Development Runoff Calculations**

Area #	Area (sf)	Area (acres)	Existing Runoff Coefficient	Tc - Existing (min)	Rainfall Intensity (in/hr)	Q - Post Development (cfs)	Difference between Pre and Post Development Conditions
2,3,4,6	480528	11.03	0.50	10	8.3	45.8	21.6

**50-Year Storm  
Undeveloped Runoff Calculations**

Area #	Area (sf)	Area (acres)	Existing Runoff Coefficient	Tc - Existing (min)	Rainfall Intensity (in/hr)	Q - Undeveloped (cfs)
2,3,4,6	455030	10.45	0.35	20	7.5	27.4

**Post-Development Runoff Calculations**

Area #	Area (sf)	Area (acres)	Existing Runoff Coefficient	Tc - Existing (min)	Rainfall Intensity (in/hr)	Q - Post Development (cfs)	Difference between Pre and Post Development Conditions
2,3,4,6	480528	11.03	0.50	10	9	49.6	22.2

**100-Year Storm  
Undeveloped Runoff Calculations**

Area #	Area (sf)	Area (acres)	Existing Runoff Coefficient	Tc - Existing (min)	Rainfall Intensity (in/hr)	Q - Undeveloped (cfs)
2,3,4,6	455030	10.45	0.35	20	8.3	30.3

**Post-Development Runoff Calculations**

Area #	Area (sf)	Area (acres)	Existing Runoff Coefficient	Tc - Existing (min)	Rainfall Intensity (in/hr)	Q - Post Development (cfs)	Difference between Pre and Post Development Conditions
2,3,4,6	480528	11.03	0.50	10	9.8	54.1	23.7

**Elevation Calculations Based on Allowable Release Rate**

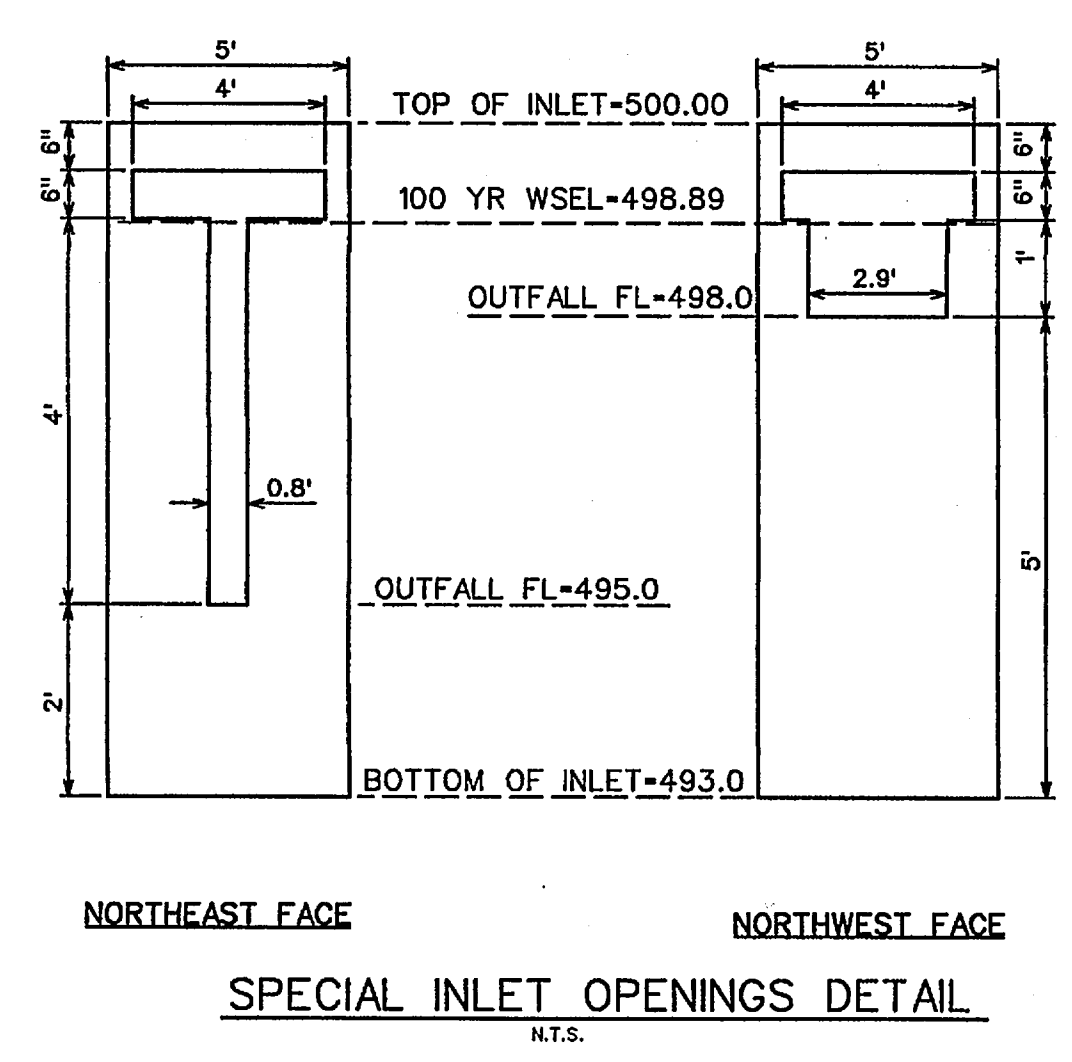
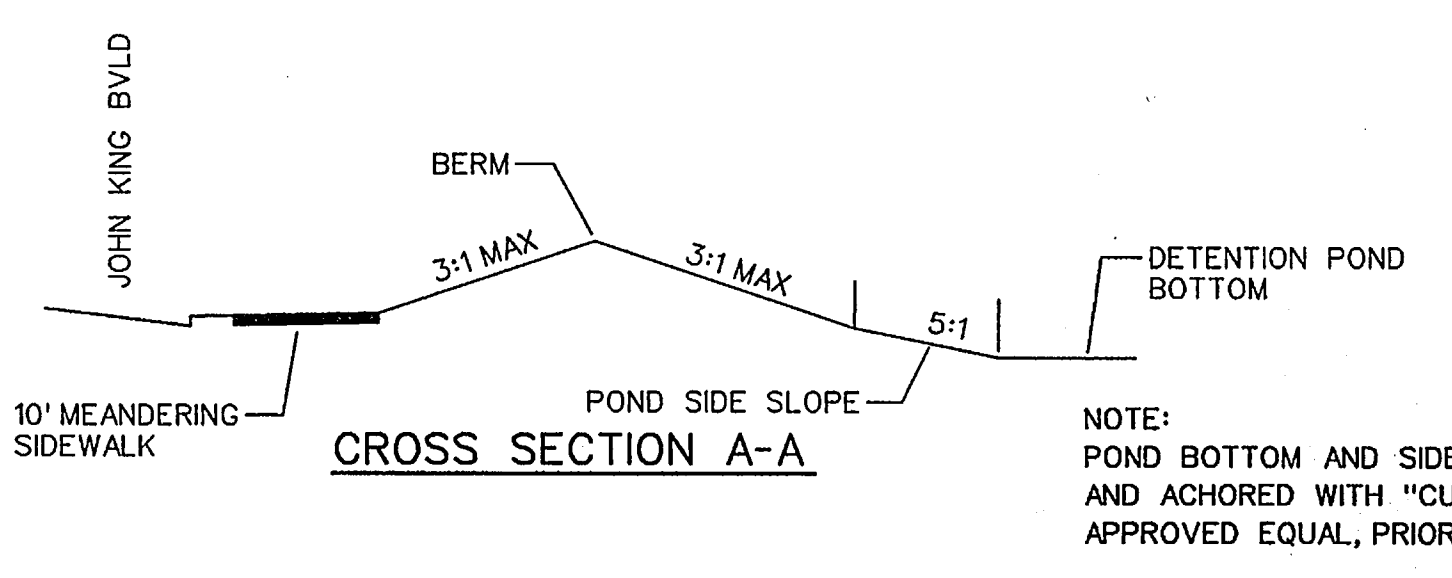
Event	Storage Requirement	Occurs at Elevation	Maximum Allowable Release Rate
2-year	15653	497.88	14.3
10-year	21770	498.28	21.6
25-year	25449	498.51	24.1
50-year	27705	498.63	27.4
100-year	32090	498.89	30.3

**Elevation-Storage Table**

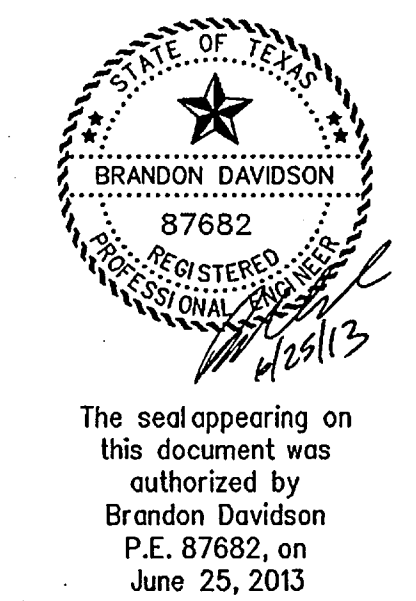
Elevation (cf)	Volume
495	0
496	1476
497	6885
498	17057
499	33859
500	58515

**Stage/Discharge Calculations Based on Control Structure (Weir Equation)**

Stage	Lower Opening			Upper Opening			Total Discharge	Allowable Discharge	Above (Below)
	Height	Weir Length	Discharge	Height	Weir Length	Discharge			
495.00	0.00	0.00	0.0	-	-	0.0	0.0		
495.50	0.50	0.80	1.0	-	-	0.0	1.0		
496.00	1.00	0.80	2.7	-	-	0.0	2.7		
496.50	1.50	0.80	4.9	-	-	0.0	4.9		
497.00	2.00	0.80	7.6	-	-	0.0	7.6		
497.88	2.88	0.80	13.1	-	-	0.0	13.1	14.3	(1.20)
498.28	3.28	0.80	16.0	0.28	2.90	1.5	17.5	21.6	(4.12)
498.51	3.51	0.80	17.7	0.51	2.90	3.6	21.3	24.1	(2.84)
498.63	3.63	0.80	18.7	0.63	2.90	4.9	23.6	27.4	(3.84)
498.89	3.89	0.80	20.7	0.89	2.90	8.3	29.0	30.3	(1.30)
499.00	4.00	0.80	21.5	1.00	2.90	9.8	31.3		



SEE SHT. 16B FOR REINFORCING



The seal appearing on this document was authorized by Brandon Davidson P.E. 87682, on June 25, 2013

**AS-BUILT APRIL 2014**  
INFORMATION PROVIDED BY CONTRACTORS  
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**CORWIN ENGINEERING, INC.**  
200 W. BELMONT, SUITE E  
ALLEN, TEXAS 75013 (972)396-1200  
TBPE FIRM #5951

**DEVELOPMENT PLANS FOR  
BREEZY HILL  
PHASE I  
ROCKWALL, TEXAS**

**DETENTION POND PLAN - SOUTH POND**

DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER	DATE	SCALE	16 OF 18
12003	APRIL 2013	1"=40'	